

CLAIMS

What is claimed is:

Claim 1. A video surveillance system for use in a vehicle interior including:

a plurality of video cameras generating video signals positioned throughout the vehicle interior so as to cover an entire area of interest;

a video multiplexer that routes the video signals;

an imaging processing system that receives the video signals from the multiplexer and stitches the video signals to provide an image of the vehicle interior;

an image enhancement system capable of building a very high resolution image from multiple frames of video signal;

a controller which allows an operator to change and control the image being processed;

a control computer which coordinates the various components of the system; and

an image display for receiving and displaying the image output from the processor for review.

Claim 2 the video system of Claim 1, wherein the image enhancing system has means to display an iconic representation of the vehicle interior on the image display so as to relate the portion of the interior being shown on the image display to the overall vehicle interior.

Claim 3. The video system of Claim 2 wherein the iconic representation is a geometric seating layout of the vehicle interior in which individual occupants are imaged.

Claim 4. The video system of Claim 1 having a transceiver attached to the processor whereby the processor can broadcast and receive information from outside the vehicle.

Claim 5 the video monitoring system of Claim 1 having near infrared illuminators to provide signals from the video cameras even when the vehicle interior is darkened.

Claim 6 the video monitoring system of Claim 1, having a ticket database containing information on ticketed passengers in the vehicle.

Claim 7 the video monitoring system of Claim 1, further including a centralized data base containing data related to various types of potential security problems that can be queried using the transceiver.

Claim 8. A video surveillance system for use in a vehicle interior including:

- a plurality of video cameras generating video signals positioned throughout the vehicle interior so as to cover an entire area of interest;

- a plurality of near infrared illuminators to provide infrared imagery even when a darkened vehicle interior exists;

- a video multiplexer that routes the video signals;

- an imaging processing system that receives the video signals from including signals in the near infrared spectrum from the multiplexer and stitches the video signals to provide an image of the vehicle interior;

- an image enhancement system capable of building a very high resolution image from multiple frames of video signal, the image enhancing system having means to display an iconic representation of the vehicle interior superimposed on the image being displayed so as to provide visual orientation to a viewer of the particular location of the interior being displayed;

- a controller which allows an operator to change and control the image being processed;

- a control computer which coordinates the various components of the system; and

an image display for receiving and displaying the image output from the processor for review.

Claim 9. The video system of Claim 7 having a transceiver attached to the processor whereby the processor can broadcast and receive information from outside the vehicle

Claim 10 the video monitoring system of Claim 7, having a ticket data base containing information on ticketed passengers in the vehicle and further having a centralized data base containing data related to various types of potential security problems that can be queried using the transceiver.

Claim 11. A video surveillance system for use in a vehicle interior including:

- a plurality of video cameras generating video signals positioned throughout the vehicle interior so as to cover an entire area of interest;

- a video multiplexer that routes the video signals;

- an imaging processing system that receives the video signals from the multiplexer and stitches the video signals to provide an image of the vehicle interior;

- an image enhancement system capable of building a very high resolution image from multiple frames of video signal;

- a controller which allows an operator to change and control the image being processed;

- a ticket database containing information on the ticketed passengers on the vehicle;

- a control computer which coordinates the various components of the system; and

an image display for receiving and displaying the image output from the processor for review.

Claim 12 the video system of Claim 1, wherein the image enhancing system has means to display an iconic representation of the vehicle interior on the image display so as to relate the portion of the interior being shown on the image display to the overall vehicle interior.

Claim 13. The video system of Claim 10 having a transceiver attached to the processor whereby the processor can broadcast and receive information from outside the vehicle.

Claim 14 the video monitoring system of Claim 10 having near infrared illuminators to provide signals from the video cameras even when the vehicle interior is darkened.